

Citation 1

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Applicants: MITSUI TOATSU CHEMICALS
Title of the Invention: TACKY FILM FOR PROTECTING SURFACE AND ITS PRODUCTION

Claim 1 of Citation 1

A process for preparing a tacky film for protecting a surface comprising the steps of 1) providing an emulsion type acrylic adhesive by copolymerizing (1) an ethylenically unsaturated carboxylic acid monomer, (2) an ethylenically unsaturated epoxy group-containing monomer, (3) an ethylenically unsaturated tertiary amine monomer, (4) at least one selected from the group consisting of alkyl (meth)acrylate monomer, and ethylenically unsaturated monomer which is copolymerizable with alkyl (meth)acrylate monomer; 2) applying the emulsion acrylic adhesive to one side of a flexible vinyl chloride film; 3) drying the applied adhesive to form an adhesive layer; and 4) winding the film to form a roll provided that the adhesive layer is inside.

Claim 2

The process for preparing a tacky film for protecting a surface according to Claim 1, wherein the ethylenically unsaturated carboxylic acid monomer is at least one selected from the group consisting of acrylic acid and methacrylic acid.

Claim 3

The process for preparing a tacky film for protecting a surface according to Claim 1, wherein the ethylenically unsaturated epoxy group-containing monomer is at least one selected from the group consisting of glycidyl acrylate, glycidyl methacrylate.

Claim 6

A tacky film for protecting a surface prepared by 1) providing an emulsion type acrylic adhesive by copolymerizing (1) an ethylenically unsaturated carboxylic acid monomer,

Citation 1 (cont)

(2) an ethylenically unsaturated epoxy group-containing monomer, (3) an ethylenically unsaturated tertiary amine monomer, (4) at least one selected from the group consisting of alkyl (meth)acrylate monomer, and ethylenically unsaturated monomer which is copolymerizable with alkyl (meth)acrylate monomer; 2) applying the emulsion acrylic adhesive to one side of a flexible vinyl chloride film; and 3) drying the applied adhesive to form an adhesive layer.

Summary of Citation 1

Example 1

An acrylic adhesive emulsion was prepared as follows: 200 parts of water; Monomer mix (A) which comprises 2 parts of methacrylic acid, 2 parts of glycidyl methacrylate, 77 parts of butyl acrylate, 5 parts of acrylonitrile, 9 parts of hydroxyethyl methacrylate, and 1 part of acrylamide; 0.5 parts of sodium dodecylbenzene sulfonate; and 0.5 parts of potassium persulfonate were charged into a reactor, and then polymerization was started by heating the reactor at 70 degrees C. After the monomer conversion ratio became 80 % or more, pH was adjusted to 7 by adding an aqueous ammonium (14%). Then, Monomer mix (B) which comprises 2 parts of dimethylamino ethyl methacrylate, and 2 parts of butyl acrylate was added to the reactor. After the addition of Monomer mix (B), polymerization was carried out for two hours at 80 degrees C to obtain an acrylic adhesive emulsion.

Example 2

An acrylic adhesive emulsion was prepared by the same process as Example 1, provided that Monomer mix (A) was 5 parts of methacrylic acid, 5 parts of glycidyl methacrylate, 75 parts of butyl acrylate, and 5 parts of acrylonitrile; and Monomer mix (B) was 5 parts of dimethylamino ethyl methacrylate, and 5 parts of butyl acrylate.

Example 3

An acrylic adhesive emulsion was prepared by the same process as of Example 1, provided that Monomer mix (A) was 0.5 parts of methacrylic acid, 0.5 parts of glycidyl methacrylate, 83 parts of butyl acrylate, 9 parts of acrylonitrile and 1 part of acrylamide; and Monomer mix (B) was 0.5 parts of dimethylamino ethyl methacrylate, and 0.5 parts of butyl acrylate.